

What is claimed is:

- 1 1. A method for screening for transcription factor modulators, the
- 2 method comprising:
- 3 forming a plurality of test samples by contacting samples of cells with
- 4 different agents; and
- 5 for each test sample, identifying which of a plurality of different activated
- 6 transcription factors are present by
- 7 taking a library of double stranded transcription factor probes, the
- 8 transcription factor probes each comprising a recognition sequence capable
- 9 of binding to an activated transcription factor, the recognition sequence
- 10 varying within the library for binding to different activated transcription
- 11 factors,
- 12 contacting the different test sample with the library of double
- 13 stranded DNA probes under conditions where DNA probe - transcription
- 14 factor complexes are formed between the DNA probes and activated
- 15 transcription factors present in the test samples,
- 16 isolating the transcription factor probes from the transcription factor
- 17 probe - transcription factor complexes formed, and
- 18 identifying which transcription factor probes in the library formed
- 19 complexes by taking an array of immobilized hybridization probes capable of
- 20 hybridizing to at least one of the strands of the different double stranded
- 21 transcription factor probes in the library and contacting the isolated
- 22 transcription factor probes with the array under conditions suitable for
- 23 hybridization of the strands of the different double stranded transcription
- 24 factor probes to the hybridization probes in the array; and
- 25 comparing the activated transcription factors present in the different test
- 26 samples.

1 2. A method according to claim 1 wherein at least 1% of the probes in the
2 library have recognition sequences greater than 35 base pairs in length.

1 3. A method according to claim 1 wherein at least 1% of the probes in the
2 library have recognition sequences greater than 40 base pairs in length.

1 4. A method according to claim 1 wherein at least 1% of the probes in the
2 library have recognition sequences greater than 45 base pairs in length.

1 5. A method according to claim 1 wherein at least 5% of the probes in the
2 library have recognition sequences greater than 35 base pairs in length.

1 6. A method according to claim 1 wherein at least 5% of the probes in the
2 library have recognition sequences greater than 40 base pairs in length.

1 7. A method according to claim 1 wherein at least 5% of the probes in the
2 library have recognition sequences greater than 45 base pairs in length.

1 8. A method according to claim 1 wherein the library comprises probes having
2 recognition sequences between 20 and 40 base pairs in length.

1 9. A method according to claim 1 wherein the library comprises probes having
2 recognition sequences between 25 and 35 base pairs in length.

1 10. A method according to claim 1 wherein the library comprises at least 5
2 different DNA recognition sequences.

1 11. A method according to claim 1 wherein the library comprises at least 10
2 different DNA recognition sequences.

1 12. A method according to claim 1 wherein the library comprises at least 20
2 different DNA recognition sequences.

1 13. A method according to claim 1 wherein the library comprises at least 50
2 different DNA recognition sequences.

1 14. A method according to claim 1 wherein the library comprises DNA
2 recognition sequences for at least 5 different types of cells.

1 15. A method according to claim 1 wherein the library comprises DNA
2 recognition sequences for at least 10 different types of cells.

1 16. A method according to claim 1 wherein the library comprises DNA
2 recognition sequences for malignant, benign, and normal cell types.

1 17. A method according to claim 1 wherein the binding regions of the
2 transcription factor probes on the array comprise at least two copies of a compliment
3 to a portion of a recognition sequence comprised on the transcription factor probe.